



## Complete Summary

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### TITLE

Stroke: percent of ischemic stroke patients with atrial fibrillation/flutter who are prescribed anticoagulation therapy at hospital discharge.

### SOURCE(S)

Specifications manual for national hospital inpatient quality measures, version 3.0b. Centers for Medicare & Medicaid Services (CMS), The Joint Commission; 2009 Oct. various p.

## Measure Domain

### PRIMARY MEASURE DOMAIN

Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the [Measure Validity](#) page.

### SECONDARY MEASURE DOMAIN

Does not apply to this measure

## Brief Abstract

### DESCRIPTION

This measure\* is used to assess the number of patients with both an ischemic stroke and atrial fibrillation/flutter who are prescribed anticoagulation therapy at hospital discharge.

\*This is a Joint Commission only measure.

### RATIONALE

Nonvalvular atrial fibrillation (NVAf) is a common arrhythmia and an important risk factor for stroke. It is one of several conditions and lifestyle factors that have been identified as risk factors for stroke. It has been estimated that over 2 million adults in the United States have NVAf. While the median age of patients with atrial fibrillation is 75 years, the incidence increases with advancing age. For example, The Framingham Heart Study noted a dramatic increase in stroke risk

associated with atrial fibrillation with advancing age, from 1.5% for those 50 to 59 years of age to 23.5% for those 80 to 89 years of age. Furthermore, a prior stroke or transient ischemic attack (TIA) is among a limited number of predictors of high stroke risk within the population of patients with atrial fibrillation. Therefore, much emphasis has been placed on identifying methods for preventing recurrent ischemic stroke as well as preventing first stroke. Prevention strategies focus on the modifiable risk factors such as hypertension, smoking, and atrial fibrillation. Analysis of five placebo-controlled clinical trials investigating the efficacy of warfarin in the primary prevention of thromboembolic stroke, found the relative risk of thromboembolic stroke was reduced by 68% for atrial fibrillation patients treated with warfarin. The administration of anticoagulant therapy, unless there are contraindications, is an established effective strategy in preventing recurrent stroke in high stroke risk-atrial fibrillation patients with TIA or prior stroke.

## **PRIMARY CLINICAL COMPONENT**

Stroke; atrial fibrillation/flutter; anticoagulant therapy

## **DENOMINATOR DESCRIPTION**

Ischemic stroke patients with documented atrial fibrillation/flutter (see the related "Denominator Inclusions/Exclusions" field in the Complete Summary)

## **NUMERATOR DESCRIPTION**

Ischemic stroke patients prescribed anticoagulation therapy at hospital discharge

## **Evidence Supporting the Measure**

## **EVIDENCE SUPPORTING THE CRITERION OF QUALITY**

- A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence
- A formal consensus procedure involving experts in relevant clinical, methodological, and organizational sciences

## **NATIONAL GUIDELINE CLEARINGHOUSE LINK**

- [Primary prevention of ischemic stroke: a guideline from the American Heart Association/American Stroke Association Stroke Council: cosponsored by the Atherosclerotic Peripheral Vascular Disease Interdisciplinary Working Group; Cardiovascular Nursing Council; Clinical Cardiology Council; Nutrition, Physical Activity, and Metabolism Council; and the Quality of Care and Outcomes Research Interdisciplinary Working Group.](#)
- [\(1\) Guidelines for prevention of stroke in patients with ischemic stroke or transient ischemic attack. \(2\) Update to the AHA/ASA recommendations for the prevention of stroke in patients with stroke and transient ischemic attack.](#)

## Evidence Supporting Need for the Measure

### NEED FOR THE MEASURE

Use of this measure to improve performance

### EVIDENCE SUPPORTING NEED FOR THE MEASURE

Fuster V, Ryden LE, Asinger RW, Cannom DS, Crijns HJ, Frye RL, Halperin JL, Kay GN, Klein WW, Levy S, McNamara RL, Prystowsky EN, Wann LS, Wyse DG, Gibbons RJ, Antman EM, Alpert JS, Faxon DP, Fuster V, Gregoratos G, Hiratzka LF, Jacobs AK, Russell RO, Smith SC, Klein WW, Alonso-Garcia A, Blomstrom-Lundqvist C, De Backer G, Flather M, Hradec J, Oto A, Parkhomenko A, Silber S, Torbicki A. ACC/AHA/ESC guidelines for the management of patients with atrial fibrillation: executive summary. A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines and the European [trunc]. J Am Coll Cardiol 2001 Oct;38(4):1231-66. [PubMed](#)

Goldstein LB, Adams R, Alberts MJ, Appel LJ, Brass LM, Bushnell CD, Culebras A, Degabara TJ, Gorelick PB, Guyton JR, Hart RG, Howard G, Kelly-Hayes M, Nixon JV, Sacco RL, American Heart Association/American Stroke Association Stroke Council, Atherosclerotic Peripheral Vascular Disease Interdisciplinary Working Group, Cardiovascular Nursing Council, Clinical Cardiology Council, Nutrition, Physical Activity, and Metabolism Council, Quality of Care and Outcomes Research Interdisciplinary Working Group, American Academy of Neurology. Primary prevention of ischemic stroke: a guideline from the American Heart Association/American Stroke Association Stroke Council [trunc]. Stroke 2006 Jun;37(6):1583-633. [PubMed](#)

Gorelick PB, Sacco RL, Smith DB, Alberts M, Mustone-Alexander L, Rader D, Ross JL, Raps E, Ozer MN, Brass LM, Malone ME, Goldberg S, Booss J, Hanley DF, Toole JF, Greengold NL, Rhew DC. Prevention of a first stroke: a review of guidelines and a multidisciplinary consensus statement from the National Stroke Association. JAMA 1999 Mar 24-31;281(12):1112-20. [128 references] [PubMed](#)

Sacco RL, Adams R, Albers G, Alberts MJ, Benavente O, Furie K, Goldstein LB, Gorelick P, Halperin J, Harbaugh R, Johnston SC, Katzan I, Kelly-Hayes M, Kenton EJ, Marks M, Schwamm LH, Tomsick T. Guidelines for prevention of stroke in patients with ischemic stroke or transient ischemic attack: a statement for healthcare professionals from the American Heart Association/American Stroke Association Council on Stroke [trunc]. Stroke 2006 Feb;37(2):577-617. [466 references] [PubMed](#)

## State of Use of the Measure

### STATE OF USE

Current routine use

### CURRENT USE

Accreditation  
Collaborative inter-organizational quality improvement  
Internal quality improvement

### Application of Measure in its Current Use

#### **CARE SETTING**

Hospitals

#### **PROFESSIONALS RESPONSIBLE FOR HEALTH CARE**

Measure is not provider specific

#### **LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED**

Single Health Care Delivery Organizations

#### **TARGET POPULATION AGE**

Age greater than or equal to 18 years

#### **TARGET POPULATION GENDER**

Either male or female

#### **STRATIFICATION BY VULNERABLE POPULATIONS**

Unspecified

### Characteristics of the Primary Clinical Component

#### **INCIDENCE/PREVALENCE**

Among adults age 20 and older, the estimated prevalence of stroke in 2005 was 5,800,000 (about 2,300,000 males and 3,400,000 females). Each year about 780,000 people experience a new or recurrent stroke. About 600,000 of these are first attacks, and 180,000 are recurrent attacks. On average, every 40 seconds someone in the United States has a stroke.

See also the "Rationale" field.

#### **EVIDENCE FOR INCIDENCE/PREVALENCE**

American Heart Association. Heart disease and stroke statistics - 2008 update. Dallas (TX): American Heart Association; 2008. 43 p.

#### **ASSOCIATION WITH VULNERABLE POPULATIONS**

Each year, about 60,000 more women than men have a stroke. Men's stroke incidence rates are greater than women's at younger ages but not at older ages. Blacks have almost twice the risk of first-ever stroke compared with whites.

## **EVIDENCE FOR ASSOCIATION WITH VULNERABLE POPULATIONS**

American Heart Association. Heart disease and stroke statistics - 2008 update. Dallas (TX): American Heart Association; 2008. 43 p.

## **BURDEN OF ILLNESS**

Stroke accounted for about one of every 16 deaths in the United States in 2004. When considered separately from other cardiovascular diseases, stroke ranks No. 3 among all causes of death, behind diseases of the heart and cancer. Among persons ages 45-64, 8 to 12 percent of ischemic strokes and 37 to 38 percent of hemorrhagic strokes result in death within 30 days.

Stroke is a leading cause of serious, long-term disability in the United States. The median survival time following a first stroke is 6.8 years for men and 7.4 years for women age 60-69 years-old. At age 80 and older, it is 1.8 years for men and 3.1 years for women.

## **EVIDENCE FOR BURDEN OF ILLNESS**

American Heart Association. Heart disease and stroke statistics - 2008 update. Dallas (TX): American Heart Association; 2008. 43 p.

## **UTILIZATION**

Unspecified

## **COSTS**

The estimated direct and indirect cost of stroke for 2008 is \$65.5 billion. The mean lifetime cost of ischemic stroke in the United States is estimated at \$140,048. This includes inpatient care, rehabilitation, and follow-up care necessary for lasting deficits.

## **EVIDENCE FOR COSTS**

American Heart Association. Heart disease and stroke statistics - 2008 update. Dallas (TX): American Heart Association; 2008. 43 p.

# **Institute of Medicine National Healthcare Quality Report Categories**

## **IOM CARE NEED**

Getting Better

## **IOM DOMAIN**

Effectiveness  
Safety

## Data Collection for the Measure

### CASE FINDING

Users of care only

### DESCRIPTION OF CASE FINDING

Stroke inpatients discharged with a specified International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Principal Diagnosis Code for ischemic stroke and "other" ICD-9-CM code 427.31 or 427.32, ATRIAL FIBRILLATION

### DENOMINATOR SAMPLING FRAME

Patients associated with provider

### DENOMINATOR INCLUSIONS/EXCLUSIONS

#### Inclusions

- Stroke patients with an International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Principal Diagnosis Code for ischemic stroke as listed in Appendix A of the specifications manual
- Patients with documented atrial fibrillation/flutter

#### Exclusions

- Patients less than 18 years of age
- Patients who have a Length of Stay greater than 120 days
- Patients with *Comfort Measures Only* documented
- Patients enrolled in clinical trials
- Patients admitted for *Elective Carotid Intervention*
- Patients discharged/transferred to another hospital for inpatient care
- Patients who left against medical advice or discontinued care
- Patients who expired
- Patients discharged/transferred to a federal health care facility
- Patients discharged/transferred to hospice
- Patients with a documented *Reason For Not Prescribing Anticoagulation Therapy*

### RELATIONSHIP OF DENOMINATOR TO NUMERATOR

All cases in the denominator are equally eligible to appear in the numerator

### DENOMINATOR (INDEX) EVENT

Clinical Condition  
Institutionalization

#### **DENOMINATOR TIME WINDOW**

Time window brackets index event

#### **NUMERATOR INCLUSIONS/EXCLUSIONS**

##### **Inclusions**

Ischemic stroke patients prescribed anticoagulation therapy at hospital discharge

##### **Exclusions**

None

#### **MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS**

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

#### **NUMERATOR TIME WINDOW**

Institutionalization

#### **DATA SOURCE**

Administrative data  
Medical record

#### **LEVEL OF DETERMINATION OF QUALITY**

Individual Case

#### **PRE-EXISTING INSTRUMENT USED**

Get With The Guidelines (GWTG, American Heart Association/American Stroke Association) electronic tool may be used for data collection.

### **Computation of the Measure**

#### **SCORING**

Rate

#### **INTERPRETATION OF SCORE**

Better quality is associated with a higher score

**ALLOWANCE FOR PATIENT FACTORS**

Unspecified

**STANDARD OF COMPARISON**

Internal time comparison

**Evaluation of Measure Properties****EXTENT OF MEASURE TESTING**

Unspecified

**Identifying Information****ORIGINAL TITLE**

STK-3: anticoagulation therapy for atrial fibrillation/flutter.

**MEASURE COLLECTION**

[National Hospital Inpatient Quality Measures](#)

**MEASURE SET NAME**

[Stroke](#)

**SUBMITTER**

Centers for Medicare & Medicaid Services  
Joint Commission, The

**DEVELOPER**

Centers for Medicare & Medicaid Services/The Joint Commission

**FUNDING SOURCE(S)**

All external funding for measure development has been received and used in full compliance with The Joint Commission's Corporate Sponsorship policies, which are available upon written request to The Joint Commission.

**COMPOSITION OF THE GROUP THAT DEVELOPED THE MEASURE**

The composition of the group that developed the measure is available at:  
[http://www.jointcommission.org/CertificationPrograms/PrimaryStrokeCenters/stroke\\_advisory\\_panel.htm](http://www.jointcommission.org/CertificationPrograms/PrimaryStrokeCenters/stroke_advisory_panel.htm).



## **FINANCIAL DISCLOSURES/OTHER POTENTIAL CONFLICTS OF INTEREST**

Expert panel members have made full disclosure of relevant financial and conflict of interest information in accordance with the Joint Commission's Conflict of Interest policies, copies of which are available upon written request to The Joint Commission.

## **ENDORSER**

National Quality Forum

## **ADAPTATION**

Measure was not adapted from another source.

## **RELEASE DATE**

2009 Apr

## **MEASURE STATUS**

This is the current release of the measure.

## **SOURCE(S)**

Specifications manual for national hospital inpatient quality measures, version 3.0b. Centers for Medicare & Medicaid Services (CMS), The Joint Commission; 2009 Oct. various p.

## **MEASURE AVAILABILITY**

The individual measure, "STK-3: Anticoagulation Therapy for Atrial Fibrillation/Flutter," is published in "Specifications Manual for National Hospital Inpatient Quality Measures." This document is available in Portable Document Format (PDF) from [The Joint Commission Web site](#). Information is also available from the [Centers for Medicare & Medicaid Services \(CMS\) Web site](#). Check The Joint Commission Web site and CMS Web site regularly for the most recent version of the specifications manual and for the applicable dates of discharge.

## **NQMC STATUS**

The measure developer informed NQMC that this measure was updated on April 30, 2009 and provided an updated version of the NQMC summary. This NQMC summary was updated accordingly by ECRI Institute on September 9, 2009.Â The information was verified by the measure developer on November 9, 2009.

## **COPYRIGHT STATEMENT**

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